Claims:

1. A method for automatically adjusting parameters of signal emitter of a synchronous high-speed transmission system wherein controller of signal receiver could transmit information to the controller of said signal emitter, said method comprising:

selecting a first subset of values in a predetermined set of values;

sending a request to said controller of said signal emitting means for setting said parameters to the values of said selected subset;

evaluating the quality of the signal received by said signal receiver;

if all subsets of said predetermined set of values have been selected, determining the subset corresponding to the best signal quality and sending a request to said controller of said signal emitter for setting said parameters to the values of said determined subset.

2. The method of claim 1 wherein said evaluating the quality of the received signal comprises over-sampling said received signal to determine positions of signal transitions.

3. The method of claim 1 wherein said receiver comprises a sampler controlled by a phase rotator, said evaluating the quality of the received signal comprising analyzing the behavior of said phase rotator.

4. The method of claim 1 wherein said receiver comprises a sampler controlled by a phase rotator, said evaluating the quality of the received signal comprising determining a digital eye, said digital eye characterizing the positions whereat transitions of said received signal have been detected.

5. The method of claim 4 wherein said digital eye is determined by:

setting said phase rotator in a first position;

initializing a partial value associated to said phase rotator position;

sampling the received signal;

XORing said sample and said sample shifted by 1 bit;

ORing the result of said XOR operation with said partial result associated to said phase rotator position;

replacing the value of said partial result associated to said phase rotator position by the result of said OR operation;

repeating the last four steps during a predetermined time;

setting said phase rotator in a second position and repeating the last six steps; and,

combining said partial results associated to said first and second positions.

6. The method of claim 5 wherein the phase rotator is set to all its possible positions, a partial result being determined for each position of said phase rotator, and said digital eye being determined by the combination of said partial results.

7. The method of claim 5 wherein said step of combining said partial results comprises the steps of:

emptying a value representing the digital eye, setting a bit position to the number of bits of said partial results and setting a phase rotator position value to the value of the first position reached by said phase rotator;

selecting the bit of the partial result associated to said phase rotator position value, located at said bit position;

merging said selected bit to said value representing the digital eye;

if said selected bit is part of the partial result associated to the last position of said phase rotator,

if said selected bit is the first bit of the partial result, ending said combining step;

else, decreasing said bit position by one, setting said phase rotator position value to the value of the first position reached by said phase rotator and repeating the last four steps;

else, increasing said phase rotator position value by one and repeating the last five steps.

8. The method of claim 5 further comprising correcting the digital eye:

if said shifting is a right shifting, suppressing a number n of consecutive bits equal to one, from the right, for each set of consecutive bits equal to one; or,

if said shifting is a left shifting, suppressing a number n of consecutive bits equal to one, from the left, for each set of consecutive bits equal to one,

wherein n is the number of position reached by said phase rotator, minus one.

9. A program product including:

a computer readable medium;

a computer program disposed on said computer readable medium, said computer program including a first instruction set that generates sub-sets of parameter values in a predefined set of parameter values; and

a second instruction set to select sub-sets of parameter values to be used as parameter values for a signal generating emitter.

10. A method comprising:

generating a signal by a signal emitter whose parameter values are being set to at least two different sub-sets of values;

evaluating the quality of said signal, with a signal analyzer, as each set of the at least two different sub-sets of parameter values are being applied; and

setting the parameter values of said signal emitter to the sub-set of parameter values providing best quality of signal.

11. The method of claim 10 wherein evaluating includes generating a digital eye based upon oversampling of said signal.

12. The method of claim 11 wherein the best quality of signal is being determined from the digital eye.

13. The method of claim 10 wherein the evaluating further includes providing a phase rotator to sample the signal.

14. The method of claim 13 wherein behavior of the phase rotator is used to determine quality of the signal.

15. The method of claim 13 further including generating a digital eye by moving the phase rotator to different positions within a beginning location and an end location; and

sampling data at each position.

16. The method of claim 15 wherein the quality of signal is being determined from the digital eye.

17. The program product of claim 9 further including a third instruction set which analyzes a signal generated by the signal generating emitter; and

a fourth instruction set identifying the sub-set of parameter values that generate the signal with best quality.

18. An apparatus that automatically determines parameter values for a signal emitter comprising:

a first controller responsive to a request signal to provide different sub-sets of parameter values to said signal emitter; and

a second controller generating the request signal, evaluating quality of signal generated by said signal emitter and selecting the sub-set of parameter values providing the best Quality of Signal.

19. The apparatus of claim 18 further including a communication channel interconnecting the first controller and the second controller.

20. The apparatus of claim 19 further including said second controller sending a second request instructing said first controller to set parameter values of said emitter to the sub-set of parameter values providing best quality of signal.

21. The apparatus of claim 18 wherein the first controller and the second controller includes microprocessors.